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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 09/735,249   | 12/11/2000  | Charles R. Cahn      | SIRF-56139(22-US-C1) | 6416             |
| 24201  | 7590        | 02/12/2004           | EXAMINER             |                  |
| FULWIDER PATTON LEE & UTECHT, LLP<br>HOWARD HUGHES CENTER<br>6060 CENTER DRIVE<br>TENTH FLOOR<br>LOS ANGELES, CA 90045 |             |                      | HA, DAC V            |                  |
|  |             |                      | ART UNIT             | PAPER NUMBER     |
|  |             |                      | 2634                 | 10               |
| DATE MAILED: 02/12/2004  |             |                      |                      |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/735,249

**Applicant(s)**

CAHN ET AL.

**Examiner**

Dac V. Ha

**Art Unit**

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 30-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-33, 36, 37, 39-45, 48, 51-57, 60, 63 and 64 is/are rejected.
- 7) ☒ Claim(s) 34, 35, 38, 46, 47, 49, 50, 58, 59, 61, 62 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 30-33, 36, 37, 39-45, 48, 51-57, 60, 63, 64** rejected under 35

U.S.C. 102(b) as being anticipated by Meehan (US 5,347,536).

**Regarding claim 41**, Meehan teaches the following claimed subject matter.

“a receiver ... comprising a PN code” (Figure 14, Incoming Signal; Abstract)

“a code generator ... received signal” (Figure 14, element 105)

“an error detector ... and the received signal” (Figure 14, elements 150, 130, 125, 190; Col. 10, lines 6-34)

**Regarding claim 53**, see claim 41 above. Further, Meehan teaches that the multipath errors are caused by the delay in multipath received signals. The output of element 150 in Figure 14 is pseudo-range error correction signal, which is utilized for correcting the delay of that of the received signal, thus inherently teaches the claimed subject matter “multipath error detector”.

**Regarding claim 30**, see claim 41 above. Further, the correlation sum of the elements 140, 135, 185 utilized for error correction determination teaches the “relationship between an amplitude”.

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**Regarding claim 31**, Meehan further teaches the following claimed subject matter.

“power ... correlation products;” (Figure 14, elements 140, 135, 185; Abstract)

“phase ... correlation products;” (Col. 3, lines 37-39; Col. 5, lines 8-29)

“quadrature ... correlation products;” (Figure 2)

**Regarding claim 32**, Meehan further teaches the following claimed subject matter “determining ... multipath error” in Col. 4, lines 28-45.

**Regarding claim 33**, Meehan further teaches the following claimed subject matter “wherein ... product” in Col. 3, lines 58-67; Col. 4, lines 10-24, 28-44.

**Regarding claim 36**, Meehan further teaches the following claimed subject matter “further ... processor” in Figures 13, 14, 15, elements 150 and Figure 15, element 198.

**Regarding claim 37**, Meehan further teaches the following claimed subject matter “further ... adjusted” in Figures 13, 14, 15, elements 150 and Figure 15, element 198.

**Regarding claim 39**, Meehan further teaches the following claimed subject matter “further ... multipath signal” in Col. 3, lines 29-36; Col. 3, lines 46-52.

**Regarding claim 40**, Meehan further teaches the following claimed subject matter “further ... cancellation” in Abstract; Col. 3, line 46 to Col. 4, line 46; Col. 10, line 4-34.

**Regarding claim 42**, Meehan further teaches the following claimed subject matter “further ... correlation product” in Figure 14, element 150.

**Regarding claim 43**, see claim 31 above.

**Regarding claim 44**, see claim 32 above.

**Regarding claim 45**, see claim 33 above.

**Regarding claim 48**, see claim 36 above.

**Regarding claims 51, 52**, see claims 39, 40 above, respectively.

**Regarding claim 54**, see claim 42 above.

**Regarding claim 55**, see claim 31 above.

**Regarding claim 64**, see claim 40 above.

**Regarding claim 60**, see claim 48 above.

**Regarding claim 56**, see claim 32 above.

**Regarding claim 57**, see claim 33 above.

**Regarding claim 63**, see claims 39, 40 above.

***Allowable Subject Matter***

3. **Claims 34, 35, 38, 46, 47, 49, 50, 58, 61, 62** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments filed on 12/01/03 have been fully considered but they are not persuasive.

In the REMARKS, page 12, paragraph 3, applicants have argued "Applicants submit that Meehan ... as claimed." The claims recite "detecting" "error based on at

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least one relationship between elements of cross-correlation products". Meehan teaches detecting error based on cross-correlation function, which is derived from cross-correlation products. Therefore, Meehan does teach the claimed subject matter as claimed.

In the REMARKS, page 12, paragraph 4 to page 13, paragraph 2, applicants argued, particularly, "Meehan does not teach detecting a multipath error in a received signal based on at least one relationship between an amplitude of the early correlation product, ..." First, Meehan clearly deals with reducing multipath error, which is cited through out the disclosure (i.e. Abstract). Secondly, Meehan teaches a multipath correction method, which utilizes the results derived from the cross-correlation products. Specifically, in detecting such results, it is the "amplitude" (i.e. the signal strength) of the signal is used to determine if the received signal is acquired. Meehan also cites such method in the Abstract, Col. 3, lines, 31, 38, Col. 7, line 22.

Similar reason is applied to applicants' argument for independent claims 41, 53 on pages 13, 14.

### ***Conclusion***

5. This is a RCE of applicant's earlier Application No. 09/735,249. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL**

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even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-5500.

Dac V. Ha  
Examiner  
Art Unit 2634



STEPHEN CHIN  
SUPERVISORY PATENT EXAMINE  
TECHNOLOGY CENTER 2600